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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,057	05/13/2005	Gerard De Haan	NL 021149	9415
24737 7590 04/24/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
AKHAVANNIK, HADI				
ART UNIT		PAPER NUMBER		
2624				
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04/24/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,057

Applicant(s)

DE HAAN, GERARD

Examiner

HADI AKHAVANNIK

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Arguments

The objection to claim 6 is withdrawn.

The 101 rejection is withdrawn.

Applicant's argues that neither Avinash does not teach the spatial enhancement filter. The examiner believes this feature is taught in figure 3, item 78. Here an intermediate filtered image is taught that is based on a first image and then the image is changed to a second image that is expanded. This is also taught in column 6 line 50 to column 7 line 11.

Also, as explained in the rejection, Berkner discloses making a higher resolution image by using the LL and HH image to create higher resolution image.

Please see the final office action below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkner et al. (7239424 referred to as "Berkner" herein) in view Avinash et al. (6592523, referred to as "Avinash" herein).

Regarding claim 1, Berkner discloses an image conversion unit for converting a first image with a first resolution into a second image with a second resolution, the second resolution being higher than the first resolution that the image conversion unit comprising: a noise adder arranged to add noise to the second image, wherein the said noise comprises spectral components that are in a part of a frequency spectrum that is above the Nyquist frequency of the first image (see figure 4b and column 16 line 62 to column 17 line 5. In this case the first image is the LL image and blue noise is added to HH and then this data is combined back together to the original first LL image to create a higher resolution with blue noises added to the LL image. The information is above the Nyquist frequency of the first image because the information is added to the HH region which is outside the frequency spectrum of the first LL image).

Regarding claim 1, Berkner does not explicitly disclose a filter.

Please see figure 3 of Avinash as it discloses filters in the intermediate range that are used to filter and enhance the first image to create a better second image. The structures which make up the image are enhanced by the filter. Also see columns 6-7 of Avinash.

It would have been obvious at the time of the invention to one of ordinary skill in the art to include in Berkner the filter as taught by Avinash. The reason for the combination is because it makes for a more robust system that is able to enhance images using a filter.

Regarding claims 2-3, as disclosed above Berker discloses that the noise is above the Nyquist of the first image and that the noise is blue noise.

Regarding claim 4, Berker discloses that noise may be added to each wavelet decomposition image including the LL image in column 17 lines 1-5. The amount of noise energy would therefore be higher than the energy of the further components.

Regarding claim 5, Berkner discloses that the amount of noise that is added is based on a noise measurement (see column 16 lines 62-70 which discloses noise measurement to create the desired colored for halftoning).

Regarding claim 6, see the rejection of claim 1, where Avinash discloses that a filter is applied to an intermediate image that will result in a second image in figure 3.

Regarding claims 7-8, please see the rejection of claim 1 as it discloses all aspects of claim 7-8.

Regarding claims 9-10, please see column 17 lines 45-57 as it discloses a display.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HADI AKHAVANNIK whose telephone number is (571)272-8622. The examiner can normally be reached on 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bhavesh M Mehta/
Supervisory Patent Examiner, Art Unit 2624

HA
4/20/09